What is claimed is:

1. A method of stimulating a subterranean formation penetrated by a well comprising the steps of:

(a) introducing into the formation an aqueous treatment fluid containing a hydrophobically-modified RPM; and

(b) introducing an acidizing treatment fluid into the formation.

2. The method of Claim 1, wherein the hydrophobically-modified RPM is the reaction product of a hydrophilic polymer and a hydrophobic compound that are capable of reacting with each other.

3. The method of Claim 2, wherein the hydrophilic polymer is a polymer containing reactive amino groups in the polymer backbone or as pendant groups, which are capable of reacting with a hydrophobic alkyl halide compound.

4. The method of Claim 3, wherein the hydrophilic polymer is a homo-polymer, co-polymer, or ter-polymer.

5. The method of Claim 3, wherein the hydrophilic polymer contains dialkyl amino pendant groups.

6. The method of Claim 3, wherein the hydrophilic polymer contains a dimethyl amino pendant group and contains at least one monomer selected from the group consisting of dimethylaminoethyl methacrylate and dimethylaminopropyl methacrylamide.

7. The method of Claim 3, wherein the hydrophilic polymer is an alkyl acrylate polymer.

8. The method of Claim 3, wherein the hydrophilic polymer is selected from the group consisting of polyethyleneimine, polyvinylamine, poly(vinylamine/vinyl alcohol), chitosan, and polylysine.

9. The method of Claim 3, wherein the hydrophilic polymer is selected from the group consisting of polydimethylaminoethyl methacrylate, polydimethylaminopropyl methacrylamide, poly(acrylamide/dimethylaminoethyl methacrylate), poly(acrylic acid/dimethylaminoethyl methacrylate), poly(methacrylic acid/dimethylaminoethyl methacrylate), poly(acrylamide/dimethylaminopropyl methacrylamide), poly(acrylic acid/dimethylaminopropyl methacrylamide), and poly(methacrylic acid/dimethylaminopropyl methacrylamide).

10. The method of Claim 3, wherein the hydrophilic polymer is selected from the group consisting of polydimethylaminoethyl methacrylate and polydimethylaminopropyl methacrylamide.

11. The method of Claim 3, wherein the hydrophobic alkyl halide compound is an alkyl halide having an alkyl chain length of 6 to 22 carbons.

12. The method of Claim 11, wherein the hydrophobic alkyl halide compound is hexadecyl bromide.

13. The method of Claim 3, wherein the hydrophobically-modified RPM is a homopolymer of DMAEMA quaternized with hexadecyl bromide.

14. The method of Claim 3, wherein the hydrophobically-modified RPM is dissolved in an aqueous solution and then injected into the formation.

15. The method of Claim 3, wherein the hydrophobically-modified RPM is introduced into the formation by mixing the hydrophilic polymer and the hydrophobic

alkyl halide compound in the aqueous treatment fluid in situ during the well stimulation process.

16. The method of Claim 15, wherein the hydrophilic polymer comprises from about 0.1% to about 2% by weight of the aqueous treatment fluid and the hydrophobic compound comprises from about 0.01% to about 1% by weight of the aqueous treatment fluid.

17. The method of Claim 15, wherein the hydrophilic polymer comprises about 0.2% to about 1.5% by weight of the aqueous treatment fluid and the hydrophobic compound comprises from about 0.02% to about 0.5% by weight of the aqueous treatment fluid.

18. The method of Claim 15, wherein the aqueous treatment fluid further comprises a surfactant to promote the dissolution of the hydrophobic compound in aqueous treatment fluid.

19. The method of Claim 18, wherein the surfactant is selected from the group consisting of alkyl ammonium surfactants, betaines, alkyl ether sulfates, alkyl ether sulfonates, and ethoxylated alcohols.

20. The method of Claim 18, wherein the surfactant is present within the aqueous solution in amounts ranging from about 0.1 % to about 2 % by weight.

21. The method of Claim 3, wherein the hydrophobically-modified RPM is a polymeric material having molecular weights in the range of about 250,000 to about 3,000,000.

22. The method of Claim 3, wherein the hydrophobically-modified RPM is present in the aqueous treatment fluid in a concentration from about 0.02% to about 3% by weight.

23. The method of Claim 3, wherein the hydrophobically-modified RPM is present in the aqueous treatment fluid in a concentration from about 0.05% to about 1% by weight.

24. The method of Claim 3, wherein the aqueous treatment fluid is at a pH of between about 4 and about 8.

25. The method of Claim 1, wherein the hydrophobically-modified RPM polymer is prepared from the polymerization reaction of at least one hydrophilic monomer and at least one hydrophobically-modified hydrophilic monomer.

26. The method of Claim 25, wherein the hydrophilic monomer is selected from the group consisting of acrylamide, 2-acrylamido-2-methyl propane sulfonic acid, N,N-dimethylacrylamide, vinyl pyrrolidone, dimethylaminoethyl methacrylate, acrylic acid, dimethylaminopropylmethacrylamide, vinyl amine, vinyl acetate, trimethylammoniumethyl methacrylate chloride, methacrylamide, and hydroxyethyl acrylate.

27. The method of Claim 25, wherein the hydrophobically-modified hydrophilic monomer is selected from the group consisting of alkyl acrylates, alkyl methacrylates, alkyl acrylamides and alkyl methacrylamides wherein the alkyl radicals have from about 4 to about 22 carbon atoms, alkyl dimethylammoniumethyl methacrylate bromide, alkyl dimethylammoniumethyl methacrylate chloride and alkyl dimethylammoniumethyl methacrylate iodide wherein the alkyl radicals have from about 6 to about 22 carbon atoms and alkyl dimethylammoniumpropyl methacrylamide bromide, alkyl dimethylammonium propylmethacrylamide chloride, and alkyl dimethylammoniumpropyl methacrylamide iodide, wherein the alkyl groups have from about 4 to about 22 carbon atoms.

28. The method of Claim 25, wherein hydrophobically-modified RPM is a polymeric material having molecular weights in the range of from about 250,000 to about 3,000,000.

29. The method of Claim 25, wherein hydrophobically-modified RPM has mole ratios of the hydrophilic monomer(s) to the hydrophobically-modified hydrophilic monomer(s) in the range of from about 99.98:0.02 to about 90:10.

30. The method of Claim 25, wherein hydrophobically-modified RPM is a dimethylaminoethyl methacrylate/hexadecyldimethylammoniumethyl methacrylate bromide copolymer having a mole ratio of hydrophilic monomer to hydrophobically-modified hydrophilic monomer of 95:5.

31. The method of Claim 3 or Claim 25, wherein hydrophobically-modified RPM is capable of being dissolved in water at a concentration of at least 0.2% by weight and is capable of imparting a resistance factor for water of greater than a resistance factor for hydrocarbon as measured across a sandstone core of about 2.5 cm diameter by about 14 cm long and having an initial permeability to brine of about 1,000 md.

32. The method of Claim 31, wherein when the hydrophobically-modified RPM is tested at the concentration of 0.2% by weight, it is capable of imparting a resistance factor for water of greater than about 3 and a resistance factor for hydrocarbon of less than about 2.

33. The method of Claim 3 or 25, wherein the hydrophobically-modified RPM is introduced into the formation prior to the acidizing treatment fluid.

34. The method of Claim 3 or 25, further comprising the step of shutting in the well after introducing the polymeric material into the well.

35. A method of acidizing a subterranean formation penetrated by a well comprising the steps of:

(a) introducing into the formation an aqueous treatment fluid containing from about 0.02% to about 3% by weight of a water-soluble, hydrophobically-modified RPM that is the reaction product of a hydrophilic polymer and a hydrophobic compound that are capable of reacting with each other, wherein the hydrophilic polymer is a polymer containing reactive amino groups in the polymer backbone or as pendant groups, which are capable of reacting with a hydrophobic alkyl halide compound having an alkyl chain length of 6 to 22 carbons; and

(b) introducing an acidizing treatment fluid into the formation.

36. The method of Claim 35, wherein the hydrophobically-modified RPM is dissolved in an aqueous solution and then injected into the formation.

37. The method of Claim 3, wherein the hydrophobically-modified RPM is introduced into the formation by mixing the hydrophilic polymer and the hydrophobic alkyl halide compound in the aqueous treatment fluid in situ during the well stimulation process.

38. A method of acidizing a subterranean formation penetrated by a well comprising the steps of:

(a) introducing into the formation an aqueous treatment fluid containing from about 0.02% to about 3% by weight of a water-soluble, hydrophobically-modified RPM that is prepared from the polymerization reaction of at least one hydrophilic monomer and at least one hydrophobically-modified hydrophilic monomer; and

(b) introducing an acidizing treatment fluid into the formation.

39. The method of Claim 38, wherein the hydrophobically-modified RPM is dissolved in an aqueous solution and then injected into the formation.

40. The method of Claim 38, wherein the hydrophobically-modified RPM is introduced into the formation by mixing the hydrophilic polymer and the hydrophobic alkyl halide compound in the aqueous treatment fluid in situ during the well stimulation process.